

Appendix H. Wild and Scenic River Eligibility and Suitability Study

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Wild and Scenic River System

The Wild and Scenic Rivers Act of 1968 (Public Law 90-542, as amended) established a method of providing federal protection of our remaining free-flowing rivers and preserving them and their immediate environments for the use and enjoyment of present and future generations. Section 5(d)(1) of the Wild and Scenic Rivers Act provides that Wild and Scenic River considerations be made during federal agency planning. Congress may designate a river as part of the National Wild and Scenic Rivers System (NWSRS) or the Secretary of the Interior, upon the nomination of the Governor of the State of California, may approve the designation. Pursuant to this mandate, an evaluation of river resources within the Reserve has been conducted.

The NWSRS study process has three distinct steps:

1. Determine what rivers or river segments are eligible for NWSRS designation.
2. Determine the potential classification of eligible river segments as wild, scenic, recreational, or any combination thereof.
3. Conduct a suitability study to determine if the river segments are suitable for designation to the NWSRS.

Eligibility of Headwaters Streams

Each identified river segment was evaluated to determine whether or not it is eligible for inclusion in the NWSRS. To be eligible, a river segment must be “free-flowing” and must possess at least one “outstandingly remarkable value.” These values include

- scenic,
- recreational,
- geological,
- fish,
- wildlife,

- historic,
- cultural,
- ecological,
- riparian,
- botanical,
- hydrological, and
- scientific study.

No other factors were considered in determining the eligibility of a river segment. All other relevant factors are considered in determining suitability. A river need not be navigable by watercraft in order to be eligible. For purposes of eligibility determination, the volume of flow is sufficient if it is enough to maintain the outstandingly remarkable values identified within the segment.

The Reserve was created primarily to protect and preserve the ecological values of the unique, old-growth redwood forest community constituting the Headwaters Forest. Ecological values of the Reserve include unparalleled diversity of plant and animal species. The Reserve holds important habitat for threatened species including the marbled murrelet, northern spotted owl, coho salmon, chinook salmon, and steelhead.




The Reserve includes the headwaters of Salmon Creek and South Fork Elk River, both of which contain populations of coho and chinook salmon and steelhead (all three species are listed as threatened under the federal Endangered Species Act). Much of the portion of Salmon Creek located within the Reserve is dominated by old-growth redwood forest, abundant large woody debris, and deep pools. Much of the riparian forest along South Fork Elk River is dominated by red alder and willows. South Fork Elk River contains abundant pools, a moderate amount of large woody debris, and abundant spawning gravels in the lower reaches. Coho salmon, chinook salmon, steelhead, and coastal cutthroat trout spawn in this river. The main tributary within the Reserve is Little South Fork Elk River, which contains an impassible barrier for anadromous fish approximately 0.25 mile upstream from its confluence with South Fork Elk River. Three species of wildlife known to occur on or near the Reserve are listed as threatened or endangered—the bald eagle, northern spotted owl, and marbled murrelet.

Table H-1 lists the three rivers (or portions thereof) found in the Reserve, and describes why they were determined to be eligible for inclusion in the NWSRS. The table provides information on river length and tentative classification, and identifies the outstandingly remarkable value(s) associated with each river segment. Corridor widths vary along the South Fork Elk River coincident with the public land boundaries. Private land is not included within the corridor. Along the Little South Fork Elk River and Salmon Creek, the corridor width is 0.25 mile from each side of the streambanks.

Listed in Table H-2 are more exact descriptions of each river segment's location and a brief narrative of its outstandingly remarkable value(s). See also Figure H-1.

Figure H-1
Streams in the Headwaters
Forest Eligible for Wild and
Scenic River Designation

Legend

- Reserve Boundary
- Eligible Streams
- Permanent Roads
-  Trailheads
-  Unharvested Forest
-  Harvested Forest

Elk River Trailhead

South Fork Elk River
 Segment 1

South Fork Elk River
 Segment 2

Little South Fork Elk River
 with Tributary

Salmon Creek

Salmon Pass
 Trailhead

Headwaters Forest Reserve
 Draft Management Plan/EIS/EIR



0 2000 4000 6000 ft

Scale = 1:54,000 (1 in = 4500 ft)

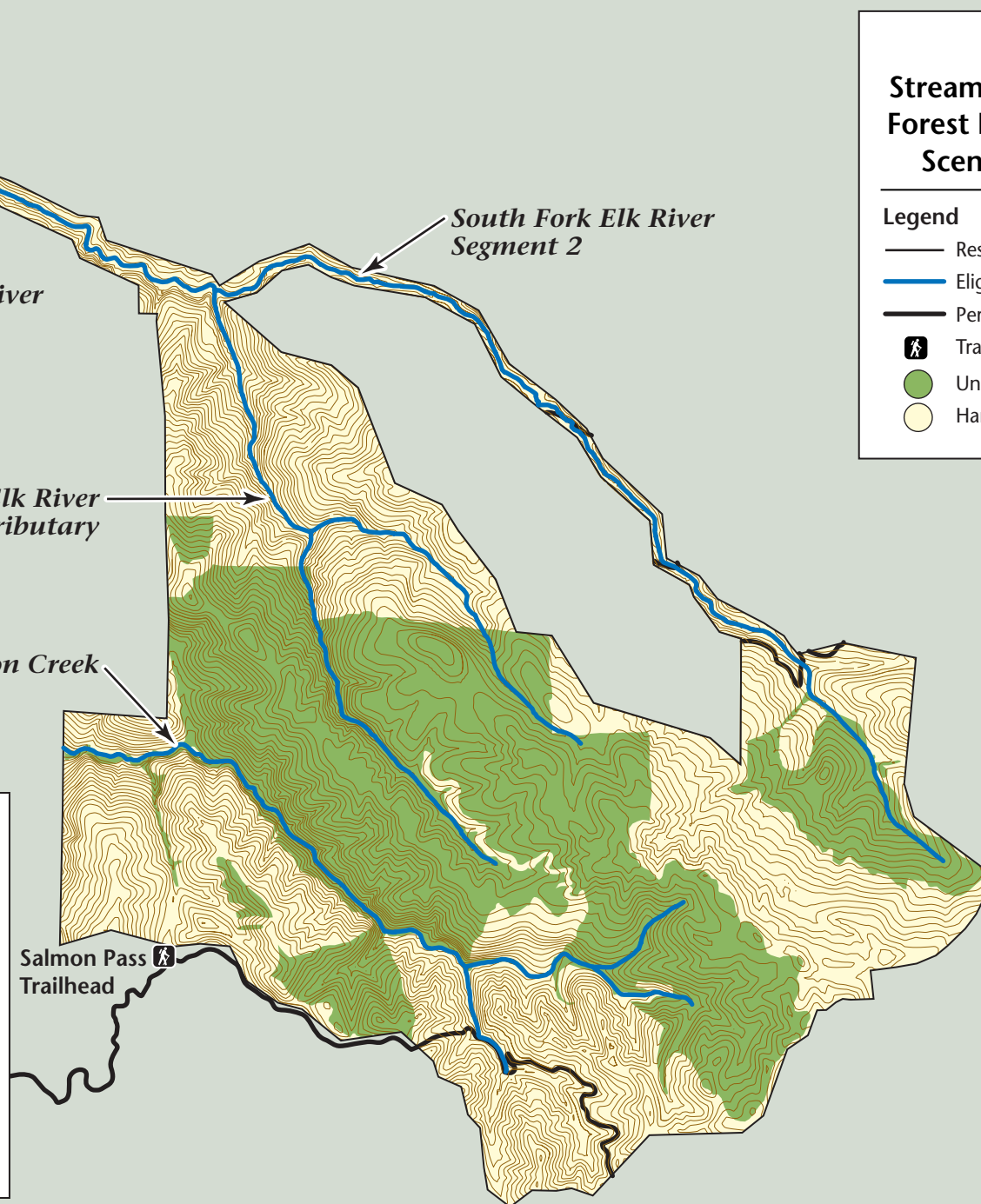


Table H-1. Eligibility of River Segments Eligibility Assessment for River Segments Identified for Possible Inclusion as Components of the National Wild and Scenic Rivers System

River Segment	Reason for Consideration ^a	Length (miles)		Free-Flowing	Outstand-ingly Remarkable Values ^b	Tentative Classification
		BLM	Other			
South Fork Elk River (Segment 1)	C, D	1.0	0.0	Yes	E, F, G, H,	Recreational
South Fork Elk River (Segment 2)	C, D	6.0	0.0	Yes	E, F, G, H	Scenic
Little South Fork Elk River with Tributary	C, D	7.0	0.0	Yes	E, F, G, H, I	Wild
Salmon Creek	C, D	5.0	0.0	Yes	E, F, G, H, I	Scenic

^a A - National Rivers Inventory
B - 1988 Outstanding Rivers List – American Rivers, Inc.
C - Potential Rivers Inventory – Arcata Field Office
D - Other

^b A - Nonexistent
B - Scenic
C - Recreational
D - Geological
E - Wildlife
F - Fish
G - Historical
H - Prehistoric
I - Ecological
J - Other

Table H-2. Outstandingly Remarkable Values of Eligible River Segments Identified for Possible Inclusion as Components of the National Wild and Scenic Rivers System

River Segment	Segment Description	Description of Outstanding Values
South Fork Elk River (Segment 1)	From the Reserve boundary just downstream from the Elk River Trailhead in Section 35, T4N, R1W, Humboldt Meridian (H.M.) to the old town site at Falk in Section 36, T4N, R1W, H.M.	Spawning habitat for indigenous chinook and coho salmon, and steelhead. Historic and prehistoric resources are located throughout the corridor.
South Fork Elk River (Segment 2)	From the old town site at Falk in Section 36, T4N, R1W, H.M. to the headwaters in Section 14, T3N, R1E, H.M.	Spawning habitat for indigenous chinook and coho salmon, and steelhead. Habitat for the northern spotted owl and bald eagle exists nearby. Historic and prehistoric resources are located in the area.
Little South Fork Elk River with Tributary	From the confluence with the South Fork Elk River to the headwaters in Section 21, T3N, R1E, H.M. The tributary starts in Section 8, T3N, R1E, H.M. and ends in Section 15, T3N, R1E, H.M.	Spawning habitat for indigenous chinook and coho salmon, and steelhead. Unique, intact old-growth redwood forest provides high-quality habitat for the threatened northern spotted owl and marbled murrelet, both of which nest in the area. Historic and prehistoric resources are located in the area.
Salmon Creek	From the Reserve boundary in Section 18, T3N, R1E, H.M. to the headwaters in Sections 22 and 28, T3N, R1E, H.M.	Suitable spawning habitat for indigenous steelhead. Old-growth redwood forest provides high quality habitat for the threatened northern Spotted owl and marbled murrelet, both of which nest in the area.

Suitability of Headwaters Streams

River segments of the South Fork Elk River, Little South Fork Elk River, and Salmon Creek were found to be eligible for inclusion into the NWSRS. Section 4(a) of the Wild and Scenic River Act mandates that all rivers found eligible as potential additions to the NWSRS be studied as to their suitability for such a designation. The purpose of the suitability study is to provide information upon which the President of the United States can base his recommendation and Congress can make a decision. The study report describes the characteristics that do or do not make the area a worthy addition to the system, the current status of land ownership and use in the area, the reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed if the area were included in the system, and several other factors. The suitability study is designed to answer these questions:

- Should the river's free-flowing character, water quality, and outstandingly remarkable values (ORV) be protected, or are one or more other uses important enough to warrant doing otherwise?
- Will the river's free-flowing character, water quality, and ORVs be protected through designation? Is it the best method for protecting the river corridor? (In answering these questions, the benefits and impacts of wild and scenic river designation must be evaluated, and alternative protection methods considered.)

- Is there a demonstrated commitment to protect the river by any nonfederal entities who may be partially responsible for implementing protective management?

Pursuant to Sections 4(a) and 5(c) of the Wild and Scenic Rivers Act, the following factors were considered and evaluated as a basis for the suitability determination for each river.

- Characteristics that do or do not make the area a worthy addition to the NWSRS.
- The current status of land ownership, minerals (surface and subsurface), and use in the area, including the amount of private land involved and associated or incompatible uses. Historical or valid existing rights that could be adversely affected.
- The reasonably foreseeable potential uses of the land and water that would be enhanced, foreclosed, or curtailed if the area were included in the NWSRS.
- The federal agency that will administer the area should it be added to the NWSRS.
- The estimated cost to the United States of acquiring necessary lands and interests in lands and of administering the area should it be added to the NWSRS. The potential for water resources development. (The intent of the Act is to preserve selected rivers from the harmful effects of water resources projects.)
- A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS.
- An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development.
- Federal, public, state, tribal, local, or other interests in designation or non-designation of the river, including the extent to which the administration of the river, including the costs thereof, may be shared by state, local, or other agencies and individuals.
- The consistency of designation with other agency plans, programs, or policies and meeting regional objectives. Designation may help or impede the "goals" of other tribal, federal, state or local agencies.
- The contribution to the river system or basin integrity.
- The ability of BLM to manage the river segments under designation, or ability to protect the river area other than Wild and Scenic River designation.

Characteristics That Do or Do Not Make the River Segments Worthy Additions to the NWSRS

Suitable River Segments

Two of the four river segments (Salmon Creek and Little South Fork Elk River with tributary) would make worthy additions to the NWSRS based on the following outstandingly remarkable values.

Ecological

Both river segments flow through a relatively undisturbed, high elevation, old-growth redwood forest supporting a unique intact ecosystem. The 3,100 acres of pristine redwood groves at this particular elevation are found nowhere else in the world. Many of the larger trees measure up to sixteen feet in diameter. Downed trees on the forest floor support a rich and abundant forest ecosystem where natural processes have endured, untouched by man, over thousands of years. Designation would significantly broaden the representation of key ecosystems in the NWSRS.

Fisheries and Special Status Species

Four species of anadromous fish occur in, or are directly influenced by habitat conditions in, both Salmon Creek and Little South Fork Elk River with tributary. These include chinook salmon, coastal cutthroat trout, coho salmon, and steelhead. The riparian areas adjacent to these two stream segments are designated critical habitat for both coho and chinook salmon. Critical habitat is defined as specific areas, either occupied or unoccupied, that are essential to the conservation of a listed species and that may require special management considerations or protection. Other special status species include the southern torrent (seep) salamander, northern red-legged frog, tailed frog, and osprey. Wild and Scenic River designation would help ensure the preservation and protection of these species and their habitats.

Wildlife

The watersheds of Salmon Creek and Little South Fork Elk River with tributary provide unique and outstanding habitat for two bird species federally listed as threatened. These include the marbled murrelet and northern spotted owl. Both species have been confirmed present in the area, with significant populations of murrelets nesting adjacent to both river segments.

Unsuitable River Segments

The other two river segments – South Fork Elk River, Segments 1 and 2 – have undergone extensive human disturbance and are not considered to be an intact, properly-functioning ecosystem. Past activities such as timber harvesting, road building, construction of landings, and formation of skid roads have substantially modified the watershed, creating a landscape that would not broaden the representation of key ecosystems in the NWSRS. The two river segments do not flow through the primary 3,100-acre old-growth redwood forest. Outstandingly remarkable values include habitat for the marbled murrelet, northern spotted owl, chinook and coho salmon, steelhead, and the area contains historic and prehistoric resources. Based on these values alone, without consideration of the following 10 criteria discussed below, these two river segments would make worthy additions to the NWSRS.

The four river segments have several outstandingly remarkable values, including the 3,100-acre old-growth redwood forest that provides habitat for the threatened northern spotted owl, marbled murrelet, coho and chinook salmon, and steelhead. Although there is suitable habitat for these fish in Salmon Creek, none of the fish mentioned above have been observed during the last two years along this particular river segment. On the Little South Fork Elk River, even though spawning habitat exists, only steelhead have been observed in this river segment, and only for 0.25 mile from its confluence with the South Fork Elk River. Observations of chinook and coho salmon, and steelhead have been observed along nearly all the South Fork Elk River segment.

The 3,100 acres of old-growth redwood forest have been identified as an outstandingly remarkable ecological value. One of the primary reasons for this conclusion is that less than 5% of the original acreage of old-growth redwood forest within the California Coast Range Physiographic Province remains today. The 3,100 acres within the Reserve are estimated to make up approximately 5% of the total acreage of existing old-growth redwood forest within the province. Most of the old-growth redwood forests are located within Redwood National Park and several state parks.

Current Uses and Land Ownership Concerns

The four river segments and identified corridors are all public lands managed by BLM. The State of California has a conservation easement that covers the river segments. This easement provides a mechanism whereby the California Department of Fish and Game can ensure that the management of the Reserve meets the goals and objectives for which it was acquired. This easement provides for and encourages the two agencies to work cooperatively to ensure the protection of natural aquatic and terrestrial habitats, particularly the old-growth redwood forest and habitats for threatened and endangered species.

Approximately one-half of the mineral rights in the Reserve are owned by parties other than BLM. These mineral rights are in the process of being acquired. In the interim, it is anticipated that none of the mineral rights will be developed, due to the overriding legislation protecting the threatened and endangered species and old-growth forests in the Reserve.

Current uses along the river segments include research, monitoring, day hiking, and watershed rehabilitation that involves restoring old logging roads into a naturally appearing landscape. A small trailhead parking area has been developed at the downstream end of the South Fork Elk River segment. Hiking, nature study, and wildlife viewing occur along South Fork Elk River for the first three miles, along Little South Fork Elk River for nearly two miles, and along Salmon Creek for one mile. No other recreational activities are currently allowed along these river segments.

No water developments, water rights, or instream-flow concerns exist. Four roads and three bridges exist in South Fork Elk River (Segment 2). Rights-of-ways have been obtained by Pacific Lumber Company to use and maintain these roads and bridges for access across the river to private property. The corridor along both segments of South Fork Elk River was narrowed in width to exclude adjacent private land. This was done for two primary reasons: 1) to preclude conflicting land uses that could otherwise affect BLM's ability to protect the identified outstandingly remarkable values, and 2) to not interfere or impede the implementation of the Habitat Conservation Plan that was developed between Pacific Lumber Company and the U.S. Fish and Wildlife Service. This complex plan was an integral part in the acquisition of the Reserve, and provides a mechanism under the Endangered Species Act (Section 10) to "take" listed species in the course of Pacific Lumber Company's timber harvest operations.

One hundred percent of South Fork Elk River (Segment 1) and nearly 90% of South Fork Elk River (Segment 2) are bounded on both sides by private property. Potential land and resource uses such as timber harvesting and road building make it uncertain whether the identified outstandingly remarkable values could be fully protected if such activities were to occur in the future. BLM Manual 8351.33A(2) entitled *Wild and Scenic Rivers – Policy and Program Direction for Identification, Evaluation, and Management*, states "In situations where there is limited public lands (shoreline and adjacent lands) administered by the BLM within an identified river study area, it may be difficult to ensure those identified outstandingly remarkable values

could be properly maintained and afforded adequate management protection over time. Accordingly, for those situations where the BLM is unable to protect or maintain any identified outstandingly remarkable values, or through other mechanisms (existing or potential), river segments may be determined suitable only if the entity with land use planning responsibility supports the finding and commits to assisting the BLM in protecting the identified river values. An alternative method to consider these segments is for State, local governments, or private citizens to initiate efforts for designation under Section 2(a)(ii), or a joint study under Section 5(c) of the Wild and Scenic Rivers Act.”

Resources and Uses That Would Be Enhanced or Curtailed by Designation

The four river segments are located within the Headwaters Forest Reserve. This 7,500 acre Reserve was created primarily to protect and preserve the ecological values of the unique, old growth redwood forest community constituting the Headwaters Forest. Federal legislation for the purchase and creation of the Reserve established the following management goal: “to conserve and study the land, fish, wildlife, and forests occurring on such land while providing public recreation opportunities and meeting other management needs”. Designation would add an additional level of protection, specifically in regard to the prohibition of federal licensing of hydroelectric projects. Such prohibition is consistent with the Act, the intent of which is to preserve selected rivers from the harmful effects of water resource projects. Designation would also prohibit federal agencies from assisting in the construction of any water resource project that would have a direct and adverse effect on river values, and ensure that water resource projects do not unreasonably diminish the outstandingly remarkable values for which the river was designated.

The Headwaters Reserve Resource Management Plan proposes that extensive watershed restoration projects involving the conversion of old logging roads and skid trails into a natural appearing landscape be conducted. A few of these projects, depending on their proximity to the river segments, may be considered water resource projects, and Section 7 evaluations would be conducted for each one of them. The primary objective in conducting these activities is to protect and enhance fisheries habitat and restore the aquatic ecosystem, so designation would most likely neither enhance nor curtail watershed restoration projects from occurring.

Federal Agency that will Administer the Area Should it be Added to the National System

BLM will administer the area should it be added to the NWSRS.

Costs of Acquiring Necessary Lands and Interests in Lands and of Administering the Area

Land acquisition and interests in lands are not anticipated. Costs would be incurred with the development of a management plan and coordination with adjacent private landowners to ensure their activities would not cause offsite (downstream or downslope) impacts that could potentially affect river values.

State or Political Subdivision Participation

Headwaters Forest Reserve was purchased with both federal and state funds. The Department of the Interior (DOI) acquired fee title to the area, and the State of California acquired a conservation easement over the entire property. The Reserve is managed by the BLM, as the DOI lead agency, in cooperation with the California Department of Fish and Game (DFG), as the State lead agency. Administration of the river segments, if they were designated, would require active participation by the DFG.

Local Zoning and Other Land Use Controls

All lands within the river segments are federal public lands where local zoning or other land use controls do not apply.

Federal, Public, State, Tribal, Local, or Other Interests in Designation or Nondesignation

BLM held public scoping sessions and public hearings to solicit concerns, ideas, proposals and comments for long-term management of the Reserve. The record indicates that issues or concerns related to Wild and Scenic River designation and management were not mentioned by the public during the scoping process. No federal, public, state, tribal, or local governments have commented on either designating or not designating any rivers within or nearby the Reserve as components to the National System. Numerous written and verbal comments from individuals and conservation organizations favored designation of all four segments as part of the NWSRS.

Consistency of Designation with Other Agency Plans, Programs, or Policies, and Meeting Regional Objectives

Designation would be consistent with BLM's and DFG's primary management responsibility to protect and preserve the ecological values of the aquatic and terrestrial habitats within the Reserve.

Contribution to the River System or Basin Integrity

Salmon Creek

The entire length of Salmon Creek is approximately 13 miles. The eligible river segment is nearly five miles in length, or 38% of the total river mileage. This river segment is located in the headwaters of the watershed, and existing and planned uses within the corridor (road restoration, slope stabilization projects, weed removal) would contribute to the protection and enhancement of aquatic habitats downstream. No public lands under BLM jurisdiction are downstream from the Reserve. The private lands downstream have been heavily impacted over many years by timber harvesting and associated activities. Recently, however, lumber companies have been actively involved in watershed rehabilitation work similar to the activities that the BLM is conducting in the Reserve. Downstream from the forested lands are some privately owned

agricultural lands and further downstream at its mouth is Humboldt Bay National Wildlife Refuge.

South Fork Elk River

The entire length of South Fork Elk River is approximately 10 miles. The two river segments eligible for designation total nearly seven miles, or 70% of the total river mileage. The river flows into Elk River, which extends for roughly 10 miles and enters Humboldt Bay. The river segments are located in the middle and upper reaches of the watershed, and existing and planned uses within the corridors (trail maintenance, slope stabilization projects, weed removal) would contribute to the protection and enhancement of aquatic habitats downstream. Nearly all of watershed has been timber harvested. No public lands under BLM jurisdiction are downstream from the Reserve. Downstream from river segment #1 are numerous residences and agricultural activities. Near the river's mouth is the Elk River Wildlife Area, owned by the City of Eureka.

Little South Fork Elk River

The entire length of Little South Fork Elk River with tributary is approximately seven miles, equaling the river segment's length. This river is tributary to South Fork Elk River, which is tributary to Elk River. The river segment is located in an area of relatively undisturbed old growth redwood forest, and existing and planned uses within the corridor (road restoration, forest restoration, slope stabilization projects, weed removal) would contribute to the protection and enhancement of aquatic habitats downstream. This river segment contributes substantially to the integrity of the watershed.

Ability to Manage or Protect the River Area Other Than Wild and Scenic Designation

BLM will continue to manage the Reserve for the protection of the area's outstanding resource values, including the old-growth forest ecosystem and the rare and threatened species contained therein. Much of the Reserve is recommended for designation as a Wilderness Study Area, and the BLM's *Interim Management Policy for Lands Under Wilderness Review* contains management prescriptions and restrictions that are similar to those in the Wild and Scenic Rivers Act. The entire Reserve is also recommended to be designated as a State of California Ecological Reserve. The BLM will ensure that any water resource projects proposed in the future would not cause harmful effects on the outstanding resource values for which the Reserve was designated. Hydropower facilities, dredging, diversion and channelization, irrigation, and flood control measures are inconsistent with the authorizing legislation that created the Reserve, and would therefore not be allowed.

Analysis of Alternatives

Various combinations and alternative classifications of river segments were considered. After a thorough evaluation of the all the factors mentioned above, it was determined that three viable options exist: 1) All eligible segments determined to be suitable and recommended for designation; 2) All eligible segments determined to be unsuitable and not recommended for designation; and 3) Salmon Creek and Little South Fork Elk River with tributary determined to be suitable and recommended for designation, with South Fork Elk River (Segments 1 and 2) determined to be unsuitable and not recommended for designation.

These three alternatives were analyzed further with respect to the impacts of Wild and Scenic River designation on several resource management programs. These programs include watershed restoration, forest restoration, interpretive/educational, recreation, fire management, aquatic and terrestrial habitats and species, protection, and research and monitoring. Refer to Chapter 6. *Environmental Consequences* for analysis of the impacts of designation on these programs..

Recommendation

It is recommended that the Salmon Creek segment and the Little South Fork Elk River segment with its tributary be designated as components to the NWSRS. Segment 1 and Segment 2 of the South Fork Elk River are determined to be unsuitable. These unsuitable stream segments will be released upon signature of the Record of Decision for the Final EIS and managed consistent with this plan.

Rationale

Salmon Creek and Little South Fork Elk River with tributary would make worthy additions to the NWSRS for the following reasons:

- Both segments are located in relatively undisturbed, high elevation, old-growth redwood forests which would broaden the representation of key ecosystems in the NWSRS.
- Designation would permanently preserve and protect the rivers' free-flowing character, water quality, and a multitude of outstandingly remarkable values, including the 3,100 acres of pristine old-growth redwood forest and critical habitat for terrestrial and aquatic wildlife species, including five species federally listed as threatened: coho salmon, chinook salmon, steelhead trout, marbled murrelet, and northern spotted owl.
- Designation would compliment other recommended designations, including a portion of the Reserve being designated a Wilderness Study Area, and the entire Reserve designated as a State of California Ecological Reserve;
- A commitment has been demonstrated by a non-federal entity (DFG) to work collaboratively with the BLM in implementing protective management;
- No land ownership or resource uses would be in conflict or curtailed if these river segments were designated;
- No costs involved would be involved in acquiring necessary lands and interests in lands, because the river corridors comprise 100% federal lands managed by the BLM;
- Public support for designation was expressed (both written and oral) during the comment period for the Draft EIS.

Segments 1 and 2 of South Fork Elk River are not recommended for designation as components to the NWSRS. The primary reason is that all of the river corridor in Segment 1 and nearly 80% of the river corridor in Segment 2 is bounded by private property. Potential land and resource uses such as timber harvesting and road building make it uncertain whether the identified outstandingly remarkable values could be fully protected, if such activities were to occur in the future. BLM policy states that in situations where the BLM is unable to protect or maintain any identified outstandingly remarkable values, river segments may be determined suitable only if the entity with land use planning responsibility supports the finding and commits to assisting the BLM in protecting the identified river values. The California Department of Forestry and Fire

Protection and DFG are the two agencies that have the most responsibility for regulating land use activities on private timberlands surrounding the river corridors. The BLM will work cooperatively and collaboratively with the State of California, local governments, conservation organizations, or private citizens to facilitate efforts for designation of the South Fork Elk River under Section 2A(a)(ii) if, in the future, there is an expressed interest to do so.